

Applicant(s) : PIRASTU, et al.
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In The Claims:

Please amend claims 2, 6, 7, and 10 without prejudice to the Applicants' right to subsequently pursue the amended subject matter in the present or future application(s).

Please cancel claims 1 and 9 without prejudice to the Applicants' right to subsequently pursue the cancelled subject matter in the present or future application(s).

Please add new claims 11 to 15.

1. (Cancelled)
2. (Currently amended) Nucleic acid comprising at least one fragment of the human gene *ZNF365* in which said fragment encodes for a functional portion of at least one of the proteins of the *ZNF365* group for use in the diagnosis or treatment of pathologies associated with kidney stones.
3. (Original) Method to detect in an individual at least one mutation in the gene encoding for one of the proteins of the human *ZNF365* group located on chromosome 10 and comprising the phases:
 - collection of a sample containing a sufficient quantity of DNA from the aforesaid individual or reproducible in culture;
 - isolation of the DNA of said sample;
 - submission of the isolated DNA to exponential amplification using as an primer pair for amplification reaction at least two oligonucleotides that are able to amplify at least one fragment of the human gene *ZNF365*, in which said fragment encodes for a functional portion of at least one of the proteins of the *ZNF365* group;

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- detection of any mutations in at least one amplified fragment compared with healthy controls.
4. (Original) Method according to claim 3 in which the DNA exponential amplification phase is performed using primer pairs for the amplification reaction that is able to amplify a part of the fragment encoding the human gene *ZNF365*.
5. (Original) Method according to claim 4 in which the DNA exponential amplification phase to amplify a part of the fragment encoding the human gene *ZNF365* comprises the use of the following primer pairs:
Ala62Thr-F: 5' CTC CAC TCC ACC TTT TTA AG 3'
Ala62Thr-R: 5' GCT GAC ATT GGT ACT TAC TG 3'.
6. (Currently amended) Method according to claim 3 ~~claims 3, 4, and 5~~ in which the detection phase of any mutations in at least one amplified fragment compared with healthy controls is performed using direct sequencing.
7. (Currently amended) Diagnostic kit for pathologies associated with kidney stones to perform the method according to claim 3 ~~claims 3, 4, 5 and 6~~, that comprises:
- at least one pair of oligonucleotide primers for the exponential amplification reaction of at least one fragment of the human gene *ZNF365*, in which said fragment encodes for a functional portion of at least one of the proteins of the ZNF 365 group;
 - a control DNA from a healthy individual not affected by pathologies associated with kidney stones.

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8. (Original) Kit according to claim 7 in which oligonucleotide primer pairs in the kit for performing the amplification reaction are able to amplify a part of the region encoding the gene *ZNF365*.
9. (Cancelled)
10. (Currently amended) Protein belonging to the group of the *ZNF365* proteins or a functional portion thereof for use in the diagnosis or treatment of pathologies associated with kidney stones.
11. (New) Method according to claim 4 in which the detection phase of any mutations in at least one amplified fragment compared with healthy controls is performed using direct sequencing.
12. (New) Method according to claim 5 in which the detection phase of any mutations in at least one amplified fragment compared with healthy controls is performed using direct sequencing.
13. (New) Diagnostic kit for pathologies associated with kidney stones to perform the method according to claim 4 that comprises:
 - at least one pair of oligonucleotide primers for the exponential amplification reaction of at least one fragment of the human gene *ZNF365*, in which said fragment encodes for a functional portion of at least one of the proteins of the *ZNF 365* group;
 - a control DNA from a healthy individual not affected by pathologies associated with kidney stones.

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14. (New) Diagnostic kit for pathologies associated with kidney stones to perform the method according to claim 5 that comprises:

- at least one pair of oligonucleotide primers for the exponential amplification reaction of at least one fragment of the human gene *ZNF365*, in which said fragment encodes for a functional portion of at least one of the proteins of the ZNF 365 group;
- a control DNA from a healthy individual not affected by pathologies associated with kidney stones.

15. (New) Diagnostic kit for pathologies associated with kidney stones to perform the method according to claim 6 that comprises:

- at least one pair of oligonucleotide primers for the exponential amplification reaction of at least one fragment of the human gene *ZNF365*, in which said fragment encodes for a functional portion of at least one of the proteins of the ZNF 365 group;
- a control DNA from a healthy individual not affected by pathologies associated with kidney stones.